

The Results of Seismic-Acoustic Exploration
of the Bottom of the Japan Sea

20-119-3-52/65

depth of 100-600 m. 2 pairs of hodographs directed opposite (vstrechnyy) to each other were constructed from the data on the entering of refracted waves and data on the limit velocity of the sound as well as on the depth of the refracting boundaries of the deeper heated ground layers. 2 layers with considerably different limit velocities in both cross sections could be distinguished. The velocities differed in both cross sections. This difference seems to be due to measuring errors and to the fact that the actual geological conditions did not agree with the idealized assumptions the computation was based on. Apparently a basaltic layer of a thickness of from 6-7 to 7-8 m is stratified under the loose deposit. As it seems to the authors the results prove the fact that a considerable mass of loose ground deposits exists in the western part of the Yaponskoye sea which is not separated by distinct boundaries. The change of the thickness of this layer is obviously connected with the supply of deposits from the continent and with the relief of the subjacent

Card 3/4

ANDREYEVA, I.B. : LISITSYN, A.P. : UD:INTSEV, G.B. : NEPROCHNOV, YU.P. : SYSCHEV, N.N. :
MIKHALTSEV, I.YE.

"Results of Seismo-Acoustic Investigations of the Ocean Bottom"

31-AUG 11 Sep 59

a paper presented at the international oceanographic congress , 31 aug--11 Sep 59
NEW YORK.

so; B, 3, 142,129 22 Oct 59

PHASE I BOOK EXPLOITATION: 80V/5331

International Geological Congress. 21st, Copenhagen, 1960.
 Morakaya geologiya (Marine Geology) Moscow, Izd-vo AN SSSR, 1960.
 205 p. 2,500 copies printed. (Series: Doklady sovetskikh
 geologov, problema 10)

Editorial Board: P. L. Bezrukov, Resp. Ed.; A. V. Zhivago, V. P.
 Zerkovich and G. B. Udintsev; Ed. of Publishing House: V. S.
 Sheyman; Tech. Ed.: V. Karpov.

PURPOSE: This book is intended for geologists and oceanographers.
 COVERAGE: The book contains 18 articles representing the reports
 given by Soviet geologists at the 21st. International Geological
 Congress. Individual articles deal with the bottom topography,
 sedimentation, and tectonics of oceans (Eastern Pacific and
 Southern Indian), as well as the geomorphology and tectonics of
 the Black and Caspian Seas and Soviet sectors of the Baltic.
 An English résumé accompanies each article. No personalization

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| Shukrov, N. M., I. Ye. Mikhail'tsev, G. B. Udintsev, I. A. P. Andrushevskiy, A. P. Maitern, and Yu. I. Neprochnoy. Results of Seismic-Acoustic Investigations of the Earth's Crust Under Seas and Oceans | 35 |
| Saidova, Kh. M. Stratigraphy of Sediments and the Paleogeography of the Northwestern Pacific and the Far Eastern Seas of the USSR According to Sea-Bottom Foraminifers | 59 |
| Maitern, A. P. Formation of Sediments in the Southern Pacific and Indian Oceans | 69 |
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| Goncharova, V. P., and Yu. P. Neprochnoy. Bottom Geomorphology and Tectonic Problems of the Black Sea | 94 |
| Solov'yev, V. P., L. B. Kulakova, and G. V. Arsova. Relief and Recent Floor Structure of the Southern Caspian Sea | 105 |
| Gorshenovich, D. Ye. Recent Shelf Deposits in the Marginal Seas of Northeast Asia | 116 |
| Klenova, M. V. The Geology of the Barents Sea | 123 |
| Gorshkova, T. I. Sediments in the Norwegian Sea | 132 |
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| Zerkovich, V. P., O. K. Leont'yev, and Ye. M. Mavreskiy. The Influence of the Eurasian post-glacial transgression on the Development of the Coastal Zone of Soviet Seas | 154 |
| Aybulatov, N. A., V. L. Boldyrev, and V. P. Zerkovich. Some New Data on Sediment Streams Along Shores | 164 |
| Budanov, V. I., A. S. Iomin, P. A. Kaplin, and V. S. Medvedev. Recent Vertical Movements of Seashores in the Soviet Union | 175 |
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Cur. 24/2

ANDREYEVA, I.B.; CHINDONOVA, Yu.G.

Nature of sound-scattering layers. Okeanologia 4 no.1:112-124
'64. (MIRA 17:4)

1. Akusticheskiy institut AN SSSR.

ANDREYEVA, I.B.

Scattering of sound by fish bladders in deep scattering layers
in the ocean. Akust. zhur. 10 no.1:20-24 '64. (MIRA 17:5)

1. Akusticheskiy institut AN SSSR, Moskva.

L 21210-66 EWT(1)/EPT(n)-2/ETC(m)-6 TJP(c) WW/GG/GW

ACC NR: AP6011944

SOURCE CODE: UR/0213/65/005/006/1028/1037

AUTHOR: Andreyeva, I. B.

ORG: Acoustics Institute, AN SSSR (Akusticheskiy institut AN SSSR)

TITLE: Acoustic characteristics of sound-scattering layers in the ocean and data of echo sounder observations and direct catches

SOURCE: Okeanologiya, v. 5, no. 6, 1965, 1028-1037

TOPIC TAGS: acoustic scattering, acoustic wave, ocean acoustics, sonar

ABSTRACT: In order to take into account the influence of sound-scattering layers on the propagation of acoustic waves in the ocean it is necessary to know their quantitative acoustic characteristics: intensity of the layer, scattering coefficient and the dependence of these parameters on frequency and depth. Data from echo sounder observations can be extremely effective both for a preliminary regionalization of large ocean areas on the basis of the abundance of sound-scattering accumulations and for facilitating the regionalization made on the basis of the results of quantitative acoustic measurements. Modern echo sounders, designed for measuring ocean depths, cannot ensure measurement of the quantitative characteristics of sound-scattering layers and therefore do not make possible even qualitative evaluation of the degree and character of the influence of biological accumulations on the underwater propagation of sound. Relatively small changes and additions to depth sounder circuits

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UDC: 577.472(26)

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ACC NR: AP6011944

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would make it possible to undertake measurement of the acoustic characteristics of sound-scattering accumulations of the working frequency of the echo sounder. However, these quantitative results cannot be applied to other frequencies, since the properties of underwater scattering in most cases are essentially dependent on frequency. On the basis of biological catches it appears possible to compute the scattering coefficient and intensity of the layer and their frequency dependence. However, the present-day level of knowledge does not make it possible to make such computations with a high degree of reliability. It is necessary to refine the numerical values of the catch factor for different types of nets and apparatus and the effective scattering cross sections of sea animals of different species. Orig. art. has: 6 figures and 8 formulas. [JPRS]

SUB CODE: 08, 20, 17 / SUBM DATE: 12May65 / ORIG REF: 007 / OTH REF: 010

FW
Card 2/2

L 46956-66 ENI(1) GW
 ACC NR: AP6030456 (N) SOURCE CODE: UR/0213/66/006/004/0599/0607
 64
 AUTHOR: Andreyeva, I. B.
 61
 ORG: Acoustic Institute (Akusticheskiy institut) B
 TITLE: Study of volume sound scattering in the ocean¹² and measurement of acoustic 9M
 characteristics of scattering layers
 SOURCE: Okeanologiya, v. 6, no. 4, 1966, 599-607
 TOPIC TAGS: acoustic scattering, acoustic detection, acoustic analysis, shipborne
 acoustic detection, acoustic equipment, acoustic measurement, acoustic propagation,
 underwater explosion, underwater acoustics, underwater sound equipment, ocean
 acoustics, oceanography, volume sound scattering
 ABSTRACT: The article describes the development and use of modifications of a method
 of measuring the averaged acoustic characteristics of both the sound-scattering and
 surface-bubbling layers. Two types of experiments (see Figs. 1 and 2) were under-
 taken to determine the characteristics of volume scattering. Two formulas are given
 which serve as the initial computational relationships used in processing the experi-
 mental data. The procedures followed in both experiments are outlined in detail, and
 the methods and equipment used in recording and processing shot data are described.
 Two steps are followed in analyzing the experimental data. The first consists of
 frequency selection with the output re-recorded on magnetic tape. The primary
 Card 1/3 UDC: 551.463.262(26)

Card 2/3

L 46956-66

ACC NR: AP6030456

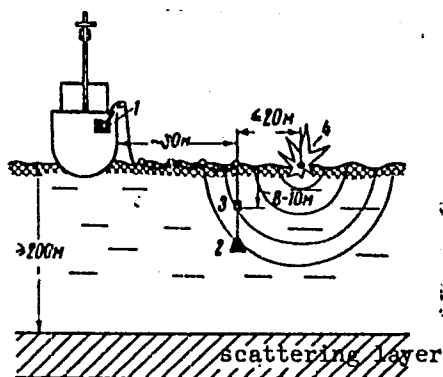


Fig. 1. Setup of components in experiment 1

1 - Recording and control system;
2 - weight; 3 - hydrophone and preamplifier; 4 - shot.

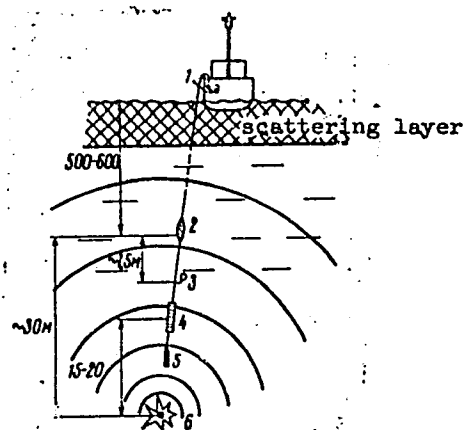


Fig. 2. Setup of components in experiment 2

1 - Recording and control system;
2 - preamplifier; 3 - hydrophone;
4 - charges; 5 - weight; 6 - shot.

recording of each shot is filtered 8 to 10 times. In the second step, the secondary recording is reproduced, amplified, and detected. Using formulas given in the article

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ACC NR: AP6030456

3

and the detector output signal, scattering strength and the dependence of the scattering coefficient on depth may be calculated manually or by computer. The assistance of I. Ye. Mikhal'tsev, Yu. Yu. Zhitkovskiy, and B. F. Kur'yanov in developing the described technique is acknowledged. Orig. art. has: 12 formulas and 6 figures. [LB]

SUB CODE: 08, 17, 19, 20/ SUBM DATE: 17Jul65/ ORIG REF: 006/ OTH REF: 008/
ATD PRESS: 5088

Card 3/3 JS

ACC NR: AP7000141

SOURCE CODE: UR/0046/66/012/004/0399/0404.

AUTHOR: Andreyeva, I. B.; Kharat'yan, Ye. G.

ORG: Acoustic Institute, AN SSSR, Moscow (Akusticheskiy institut AN SSSR)

TITLE: Sound scattering by the ocean surface and by near-surface sound-scattering layers

SOURCE: Akusticheskiy zhurnal, v. 12, no. 4, 1966, 399-404

TOPIC TAGS: scattering, sound, ~~scattering~~, grazing angle, ocean ~~scattering~~, ^{acoustics,} acoustic scattering

ABSTRACT:

The results of an investigation of sound scattering by the near-surface layers of the ocean conducted by the research vessel "Mikhail Lomonosov" in the Western equatorial region of the Atlantic Ocean in September—November 1963 are described. Underwater explosions served as acoustic sources, while a cosmic sphere located a short distance above the point of explosion was the hydrophone. The depth of the whole system was varied between 200 and 500 m. The absolute values of the effective surface backscattering coefficients (σ) were determined from the recorded scattering. The frequency dependence of σ as well as its variation with the grazing angle were also obtained within the limits of 1—40 kc and 10—60°, respectively. It was established that at

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UDC: 534.24:551.46

ACC NR: AP7000141

grazing angles less than 30° and at frequencies of 3—10 kc, the scattering field is determined primarily by volume scattering and not by scattering by nonhomogeneities of the air-water interface. At grazing angles greater than 30° and at frequencies of 1—2 kc and 10—40 cps, scattering is believed to be caused by surface nonhomogeneities. Orig. art. has: 6 formulas and 4 figures.

SUB CODE: 08/ SUBM DATE: 01Jun65/ ORIG REF: 006/ OTH REF: 007/ ATT PRESS: 5112

Card 2/2

S/186/63/005/001/007/013
EO75/E436

AUTHORS: Andreyeva, I.B., Andreyev, P.F., Rogozina, E.M.

TITLE: Investigation of the processes and interaction products of high molecular weight compounds with inorganic salts II. Formation of complexes between poly(α -methyl)acrolein and uranyl nitrate

PERIODICAL: Radiokhimiya, v.5, no.1, 1963, 103-106

TEXT: Polymerization of (α -methyl)acrolein was carried out with different catalysts to investigate the influence of substituents in the α position on the ability of the polymer to complex with $\text{UO}_2(\text{NO}_3)_2$. Ethyl-, propyl- and butyl-acroleins were also synthesized but could only be polymerized with metallic Na. Details of the polymerization procedures will be reported separately. Poly(α -methyl)acroleins obtained by emulsion polymerization with AgNO_3 and K_2SO_5 , Mohr's salt and K_2SO_5 , hyposulfite and K_2SO_5 absorbed 1000×10^{-6} g of U per g of polymer. Auto-polymerized polymer absorbed 2000×10^{-6} g of U per g of polymer, its content of aldehyde groups being of the same order (66 to 69 mol%) as in the previous polymers. The polymers
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Investigation of the processes ...

S/186/63/005/001/007/013
EO75/E436

obtained in the presence of BF_3 , lithium-butyl and Na contained only 9 to 12% aldehyde groups and did not complex with U. The complex formation took place to the greatest extent at the pH values of 3 to 4. In general the presence of methyl groups in the polymer makes it hydrophobic and less capable of complexing with U than polyacrolein. There are 1 figure and 1 table.

SUBMITTED: January 3, 1962

Card 2/2

ANDREYEVA, I. F. i ZUBKOVICH, L.E.

19856 ANDREYEVA, I. F. i ZUBKOVICH, L. E., Svoystva karbogidraz v sozrevayusheham zerne pshenitsy i sintez krakhmal'nykh zeren vne zhevoy kletki. Biokhemiya, 1949, Vyp. 3, s. 249-55. -Bibliogr: 7 nazv.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, MOSKVA, 1949.

ANDREYEVA, I.I.

Rhythm of the seasonal development of plants in the mixed beech and chestnut forests of the Batum seashore of the Caucasus. Biul. Glav. bot. sada no.51:67-77 '63. (MIRA 17:2)

1.Gosudarstvennyy pedagogicheskiy institut imeni Lenina, Moskva.

ANDREYEVA, I.I.

Shoot formation and the rhythm of seasonal development of the same species in Moscow Province and on the Batum shore. Biul. Glav. bot. sada no.54:9-16 '64.

(MIRA 17:11)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut imeni Lenina.

ACC NR: AP6025609

(N)

SOURCE CODE: UR/0413/66/000/013/0050/0050

INVENTORS: Volkov, S. N.; Makar'in, V. P.; Palevich, K. K.; Rubaylo, G. M.;
Gerasimova, I. S.; Ryazantseva, V. M.; Andreyeva, I. I.; Semenova, A. G.

3

ORG: none

TITLE: A machine for contact spot welding. Class 21, No. 183300

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 50

TOPIC TAGS: welding, spot welding, welding technology, welding equipment

ABSTRACT: This Author Certificate presents a machine for contact spot welding. The machine contains a frame and welding transformers, each of which is electrically connected to a group of welding guns (see Fig. 1). To increase the productivity, the welding transformers together with the corresponding group of welding guns are mounted on the vertical planes of plates which move under the action of a driving mechanism located on the frame. The movement takes place along the horizontal guides also located on the frame. Rods attached to one of the plates serve as auxiliary guides for another plate. These rods are intended for fixing the plates

UDC: 621.791.763.1.037

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ACC NR- AP6025609

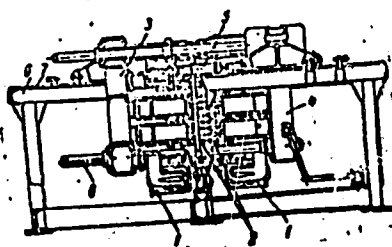


Fig. 1. 1 - welding transformers; 2 - welding guns; 3 and 4 - vertical plates; 5 - driving mechanism for plates; 6 - frame; 7 - guides; 8 - rods

in their original posit. prior to welding. Orig. art. has: 1 figure.

SUB CODE: 13/

SUBM DATE: 16Jun65

Card 2/2

ANDREYEVA, Y.M.; IVANOV, I.V.

Use of semiconductor diodes for electric frequency control in
superhigh-frequency cavity resonators. Vest.Mosk.un. Ser.3:
Fiz.,astron. 17 no.6:3-6 N-D '62. (MIRA 15:12)

1. Kafedra teorii kolebaniy Moskovskogo universiteta.
(Electric resonators) (Diodes)

ALEKSANDROVA, L.N.; ANDREYEVA, I.M.

Transformation of humus substances in the soil. Pochvovedenie
no.7:20-26 J1 '63. (MIRA 16:8)

1. Leningradskiy sel'skokhozyaystvennyy institut.
(Humus)

KAGAN, D.F., kand. tekhn.nauk; VANYAKIN, D.M., kand. tekhn. nauk;
LOBACHEV, P.V., kand. tekhn. nauk; YEKHLAKOV, S.V., inzh.;
PAVLOV, L.D., inzh.; RUZIN, M.Ya., inzh.; ANDREYEVA, I.N.,
inzh.; SHMAKOVA, G.D., inzh. Prinimali uchastiye:
SAPOZHNIKOV, M.M., kand. tekhn. nauk; GEFDING, A.K., kand.
tekhn. nauk; MALINOVSKIY, R.B., inzh.; STRASHNYKH, V.P.,
red. izd-va; KASIMOV, D.Ya., tekhn. red.

[Instructions for designing, installing, operating, and
repairing interior water supply systems using vinyl plastic
pipes] Ukazaniya po proektirovaniyu, montazhu, ekspluatatsii
i remontu vnutrennikh vodoprovodov iz viniplastovykh trub.
Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. ma-
terialam, 1961. 91 p. (MIRA 15:2)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut sa-
nitarnoy tekhniki. 2. Nauchno-issledovatel'skiy institut sa-
nitarnoy tekhniki Akademii stroitel'stva i arkhitektury SSSR
(for Kagan, Vanyakin, Lobachev, Yekhlakov, Pavlov, Ruzin,
Andreyeva, Shmakova). 3. Leningradskiy nauchno-issledovatel'skiy
institut Akademii kommunal'nogo khozyaystva im. K.D.Pamfilova
(for Sapozhnikov). 4. Vsesoyuznyy nauchno-issledovatel'skiy in-
stitut gidrotekhnicheskikh i sanitarno-tekhnicheskikh rabot
(for Gefding). 5. Institut po proyektirovaniyu zhilishchno-
grazhdanskogo stroitel'stva v g. Moskve (for Malinovskiy).
(Water pipes)

ANDREYEVA, I. N.

ANDREYEVA, I. N. -- "Determination of Constants of the Migration of a Chain of Organic Compounds in the Initiated Polymerization of Methyl Metacrylate." Min Higher Education USSR. Leningrad Order of Labor Red Banner Technological Inst imeni Leningrad Soviet. Chair of the Technology of Plastics. Leningrad, 1955. (Dissertation for the Degree of Candidate in Chemical Sciences)

SOURCE Knizhnaya Letopis', No 6 1956

ANDREYEVA, I. N.

YEGOROV, N.M.; ARKHIPOVA, Z.V.; VESSELOVSKAYA, Ye.V.; LEVINA, A.A.; SEMENOVA,
A.S.; BULAVSKIY, A.G.; ANDREYEVA, I.N.

Cyclic and continuous methods for the polymerization of ethylene
at low pressures. Khim. nauka i prom. 2 no.3:398-399 '57.
(MLBA 10:8)

1. Nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass.
(Ethylene) (Polymerization)

ANDREYEVA, I.N.

5(3)

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PHASE I BOOK EXPLOITATION

SOV/1639

Polietilen nizkogo davleniya (Low-pressure Polyethylene) Leningrad,
Goskhimizdat, 1958. 90 p. (Series: Novyye plasticheskiye massy) 10,000
copies printed.

Ed. (Title page): N.M. Yegorov; Ed. (Inside book): Ye. I. Shur;
Tech. Ed.: Ye. Ya. Erlikh.

PURPOSE: This booklet is intended for mechanics, engineers and technicians in
chemistry, petroleum technology, foods, pharmaceuticals, electrical engineering,
battery manufacturing, radio engineering, automobile manufacturing, high-
frequency engineering, television, communications, machine- and ship-building,
aviation, construction and other branches of industry employing plastic
materials.

COVERAGE: The booklet describes a new material: polyethylene produced at low
pressures. Its industrial preparation and properties are described along with
methods of making articles from this material and its application in building
technology, medicine and other branches of science. The booklet was compiled
by personnel of the Scientific Research Institute for Polymerized Plastics:
Ch. I.: I.N. Andreyeva, Z.V. Arkhipova, Ye.V. Veselovskaya, A.A. Levina;

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Low-pressure Polyethylene

80V/1639

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Ch. III. Manufacture of Polyethylene Articles and Their Fields of Application

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ANDREYEVA, I.N.; ARKHIPOVA, Z.V.; VESELOVSKAYA, Ye.V.; LEVINA, A.A.;
ANTOKOL'SKAYA, Ye.M.; LAZAREVA, N.P.; SAZHIN, B.I.; KHIN'KIS,
S.S.; SHCHERBAK, P.N.; GERBIL'SKIY, I.S.; LYANDZBERG, G.Ye.;
PARAMONKOVA, T.V.; PECHENKIN, A.L.; YEGOROV, N.M., red.;
SHUR, Ye.I., red.; FOMKINA, T.A., tekhn.red.

[Low-pressure polyethylene] Polietilen nizkogo davleniia.
Izd.2., ispr. 1 dop. Leningrad, Gos.nauchno-tekhn.izd-vo
khim.lit-ry, 1960. 95 p. (MIRA 14:1)

1. Nauchno-issledovatel'skiy institut polimerizatsionnykh plast-
mass (for all, except Yegorov, Shur, Fomkina).
(Polyethylene)

L 3912-66 EWT(m)/EPF(c)/EWP(j)/T RPL WW/RM

ACCESSION NR: AP5024496

UR/0191/65/000/010/0004/0006

AUTHOR: ^{44.55}Andreyeva, I. N.; ^{44.55}Zapletnyal V. M.; ^{44.55}Severova, N. N.; ^{44.55}Arkhipova, Z. V.

TITLE: ^{44.55}Copolymerization of ethylene with propylene using certain organic metallic catalysts

SOURCE: ^{44.55}Plasticheskiye massy, no. 10, 1965, 4-6

TOPIC TAGS: ethylene, propylene, copolymerization, catalytic polymerization, polymerization rate, copolymer, polymerization catalyst, organoaluminum compound

ABSTRACT: The relative activity of ethylene and propylene in their copolymerization using Ziegler-Natta catalysts was studied to obtain data necessary for the production of copolymers having valuable technical properties. The relative activity of propylene during copolymerization with different catalyst systems decreased in the following order: (1) $\text{Al}(\text{C}_2\text{H}_5)_2\text{Cl} + \text{TiCl}_4$; (2) $\text{Al}(\text{C}_2\text{H}_5)_3 + \text{TiCl}_4$; (3) $\text{Al}(\text{C}_2\text{H}_5)_3 + \text{VOCl}_3$; (4) $\text{Al}(\text{C}_2\text{H}_5)_2\text{Cl} + \alpha\text{-TiCl}_3$; and, (5) $\text{Al}(\text{C}_2\text{H}_5)_3 + \alpha\text{-TiCl}_3$. Change in catalyst concentration had no effect on the activity of the monomers. Change in the ratio of catalyst components in catalysts (4) and (5) did not change

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ACCESSION NR: AP5024496

the composition of the copolymer, but decrease in the ratio of the aluminum alkyl in the other catalyst systems led to an increase in the propylene content in the copolymer made with catalysts (1) and (2), and a decrease in propylene when using catalyst (3). The copolymerization constants have the same values when catalyst systems (4) or (5) are used or when the $\text{Al}(\text{C}_6\text{H}_{13})_3 + \kappa\text{-TiCl}_3$ system is used, indicating that different aluminum alkyl derivatives in combination with $\kappa\text{-TiCl}_3$ do not change the relative activity of the monomers. The copolymerization constants change significantly with a change in the aluminum organic derivatives in systems based on TiCl_4 . This is apparently due to the different reductivity of the aluminum organic derivatives and subsequent formation of different active centers. Orig. art. has: 2 tables, 1 figure and 2 equations.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: OC, MT

NR REF SOV: 002

OTHER: 004

Chel
Card 2/2

L: 7787-65 EWT(m)/EPF(c)/T/EWP(j)/EPR Pc-L/Pr-L/Ps-L RPL WH/EM

ACCESSION NR: AP000430

S/0191/65/000/002/0009/0012

32
B

AUTHOR: Shalayev, L. I.; Domareva, N. M.; Andreyeva, I. N.; Voselovskaya, L. N.;
Nikolayeva, I. I.; Gol'denberg, A. I.

TITLE: Study of the polydispersity and structure of an ethylene-propylene copolymer

SOURCE: Plasticheskiye massy, no. 2, 1965, 9-12

TOPIC TAGS: ethylene copolymer, propylene copolymer, polyolefin synthesis, polymer structure, polydispersity, Ziegler catalyst, polymer fractionation, polymer molecular weight

ABSTRACT: Ethylene and propylene were solution-polymerized in the presence of a Ziegler catalyst in order to study the molecular weight distribution, composition and intrinsic viscosity of the copolymer and the mutual effects of molecular weight and viscosity. The monomers were polymerized at 4-5 atm. with triethylaluminum-titanium tetrachloride to form a copolymer containing 4-10 mol.% propylene, determined spectrographically from the methyl group concentrations. The intrinsic viscosity was measured in decalin solution on a capillary viscometer at 135C, the weight-average molecular weight was determined with an optical

Cope 1/2

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ACCESSION NR: AP5004307

nephelometer at 140C in α -chloronaphthalene, and the polymer was fractionated by precipitation with the solvent-pair tetralin-triethylene glycol. The molecular weight distribution was shown to be similar to that of low pressure polyethylene and to be described satisfactorily by Tung's distribution functions (Journ. Polymer Science v. 24, 1957, 333). The molecular weight of the fractions decreased with increasing content of propylene links. Fractionation was shown to proceed both by copolymer composition and by molecular weight. The studied specimen did not indicate a direct dependence of molecular weight on intrinsic viscosity, and the latter parameter is not recommended for determining the molecular weight in this type of copolymer. Orig. art. has: 5 tables, 5 figures and 2 formulas.

ASSOCIATION: None

SUBMITTED: 00

IN REF SOV: 003

ENCL: 00

SUB CODE: 00

OTHER: 005

Card 2/2

ACC NR: AP6029052

(A)

SOURCE CODE: UR/0413/66/000/014/0060/0081

INVENTORS: Kuznetsov, Ye. V.; Gusev, V. I.; Zhidkova, T. N.; Andreyeva, I. N.;
Semenova, L. S.

ORG: none

TITLE: A method for obtaining copolymers of propylene. Class 39, No. 183938

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 80-81

TOPIC TAGS: polymer, copolymer, propylene, polymerization, ester, phosphoric acid,
catalyst, titanium compound, aluminum compound

ABSTRACT: This Author Certificate presents a method for obtaining copolymers of propylene with unsaturated compounds in the medium of an inert carbonaceous solvent at the temperature from 20 to 600. The process is carried out in the presence of a catalyst consisting of titanium tetrachloride and aluminum alkyls. To impart the property of fire resistance to the copolymers, unsaturated mixed esters of phosphoric acid are used as the unsaturated compounds.

SUB CODE: 11/
07/

SUBM DATE: 06Sep62

Card 1/1

UDC: 678.742.3-134.573

ANDREYEVA, I.N.; ZAPLETNYAK, V.M.; SEVEROVA, N.N.; ARKHIPOVA, Z.V.

Copolymerization of ethylene and propylene with the use of some organometallic catalysts. Plast. massy no.10:4-6 '65.

(MIRA 18:10)

ANDREYEVA, I. N.

GENKEL', P.A.; ANDREYEVA, I.N.; YERMAKOVA, K.G.; TSVETKOVA, I.V.

Effect of the new tillage system on the basic features in the
physiology of wheat. Izv. AN SSSR. Ser. biol. no. 4:448-465 J1-Ag '57.
(MLRA 10:8)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk
SSSR.

(TILLAGE) (WHEAT)

ANDREYEVA, I.N.

Plant nutrition as influenced by T.S. Mal'tsev's new tillage system
[with summary in English]. *Fiziol. rast.* 4 no.6:533-541 N-D '57.

(MIRA 10:12)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR, Moskva.
(Tillage) (Plants--Nutrition)

ANDREYEVA, I. N., Cand Biol Sci -- (diss) "Peculiarities of nutrition
of plants under new system of treatment of soil ~~according to T. S.~~"

T.S. Mal'tsev's ~~method~~ Mos, 1958. 20 pp (Inst of Physiology of Plants
in K. A. Timiryazev, Acad Sci USSR), 150 copies (KL, 17-58, 106)

-18-

1

COUNTRY : USSR
 CATEGORY : Plant Physiology. Mineral Nutrition. I
 ABS. JOUR. : RZhBiol., No. 6 1959, No. 24533
 AUTHOR : Andreyeva, I.N.
 INST. : -
 TITLE : Characteristics of Plant Nutrition Under the New
 System of Soil Cultivation of T. S. Mal'tsev
 ORIG. PUB. : Fiziol. rasteniy., 1957, 4, No. 6, 533-541
 ABSTRACT : In fields on the collective farm "Zavet Il'icha"
 and in the Shadrinskiy Rayon experimental station
 of Kurganskaya oblast', for the purpose of
 scientifically testing the new system of soil
 cultivation of T. S. Mal'tsev, a system of
 mineral nutrition of corn and sunflower was studied
 by determining the composition of the plant juices
 by the Sabinin method (Biol. otd. zemled., 1928,
 No. 15). It has been established that the method
 of diagnosing mineral nutrition by analysis of the

CARD: 1/2

11

GENKEL', P.A., prof.; ANDREYEVA, I.N., kand.biologicheskikh nauk

New scientific data on cellular structure. Biol.v shkole
no.6:83-88 N-D '62. (MIRA 16:2)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva AN SSSR.
(Cells) (Electron microscopy)

ANDREYEVA, I.N.

Absorption of mineral substances by plants subjected to a
desiccant wind. Fiziol. rast. 11 no.1:79-86 Ja-F '64.

(MIRA 17:2)

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva AN
SSSR, Moskva.

ANDREYEVA, I.N.; KURKOVA, Ye.B.

Oxidative phosphorylation in the mitochondria of corn roots,
Fiziol.rast. 12 no.4:584-590 J1-Ag '65.

(MIRA 18:12)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva AN SSSR,
Moskva. Submitted June 26, 1964.

ANDREYEVA, I. P.

"Investigation of Irregular Operation of Hydroelectric Station Aggregates."
Moscow Order of Lenin Power Engineering Institute imeni V. M. Molotov, Min Higher
Education USSR, Moscow, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended
at USSR Higher Educational Institutions (16).

ANDREYEVA, I.P., kandidat tekhnicheskikh nauk.

Stability of steady states in hydroelectric power stations and
power systems. Trudy MEI no.19:95-105 '56. (MLRA 10:1)

1. Kafedra gidroenergetiki.
(Power engineering)

ANDREYEVA, I. S.

"Anatomicomorphological and Biochemical Character of Pears with Different Rates of Ripening." Cand Agr Sci, Fruit and Vegetable Inst imeni I. V. Michurin, Min Higher Education USSR, Michurinsk, 1954. (KL, Mo 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

ANDREYEVA, I.S., kand.sel'skokhozyaystvennykh nauk

The ability of pear to take root from green cuttings.
Agrobiologiya no.1:146-147 Ja-F '59. (MIRA 12:4)

1. Saratovskiy sel'skokhozyaystvennyy institut.
(Pear)

... ANDREYEVA, I.S.

Anatomic structure of *Acanthopanax sessiliflorum* Seem. Soob. DVFAN
SSSR no.18:67-72 '63. (MIRA 17:11)

1. Dal'nevostochnyy filial imeni Komarova Sibirskogo otdeleniya AN
SSSR.

ANDREYEVA, I.S.

Anatomical characteristics of ginseng roots of various age. Mat.
k izuch. zhen'shenia i lim. no.4:116-121 '60. (MIRA 13:9)

1. Dal'nevostochnyy filial Sibirskogo otdelaniya AN SSSR.
(GINSENG) (ROOTS (BOTANY)—ANATOMY)

ANDREYEVA, I.S.

Comparative microchemical study of plants of the ginseng family in
the Far East. Mat. k izuch. zhen'shenia i lim. no.4:222-224 '60.
(MIRA 13:9)

1. Dal'nevostochnyy filial Sibirskogo otdeleniya AN SSSR.
(SOVIET FAR EAST—GINSENG) (GLYCOSIDES)

ANDREYEVA, I.S.

Some anatomical characteristics of *Eleutherococcus senticosus* Max.
Soob.DVFAN SSSR no. 15:135-138 '62. (MIRA 17:9)

1. Dal'nevostochnyy filial Sibirskogo otdeleniya AN SSSR.

ISAYEVA, Z.G.; ANDREYEVA, I.S.

Interaction of Δ^3 -carene oxide with methyl alcohol in the presence of sodium methylate. Dokl. AN SSSR 152 no.2:342-345. S '63. (MIRA 16:11)

1. Nauchno-issledovatel'skiy khimicheskiy institut im.A.M.Butlerova pri Kazanskom gosudarstvennom universitete im. V.I. Ul'yanova-Lenina. Predstavleno akademikom B.A. Arbuzovym.

ISAYEVA, Z.G.; ANDREYEVA, I.S.

Isomerization of Δ^2 -carene oxide in the reaction with alcohols
in the presence of acids. Dokl. AN SSSR 152 no.1:106-109 S
'63. (MIRA 16:9)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A.M. Butlerova
Kazanskogo gosudarstvennogo universiteta im. Ul'yanova-Lenina.
Predstavleno akademikom B.A. Arbuzovym.
(Carene) (Alcohols) (Isomerization)

ANDREYEVA, I.S.

Dynamics of the reserve substances of ginseng during the vegetative period. Mat. k izuch. zhen'. i drug. lek. rast. Dal'. Vost. no.5:45-52 '63.

Anatomic and microchemical characteristics of the roots of ginseng from distant regions. Ibid.163-67 (MIRA 17:8)

1. Dal'nevostochnyy filial imeni Komarova Sibirskogo otdeleniya AN SSSR.

ARBUZOV, B.A.; ISAYEVA, Z.G.; ANDREYEVA, I.S.

Isomerization of α -pinene and β -carene oxides with lithium diethylamine. Izv. AN SSSR. Ser. khim. no.5:838-843 '65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A.M. Butlerova Kazanskogo gosudarstvennogo universiteta im. V.I. Ul'yanova-Lenina.

ANDREYEVA, I. V.

1420 Issledova_iye napryazhenniy v tsilindrakh gidravlicheskikh pressov. M., 1954
8 s. 19 sm. (M-vo vyssh. obrazovaniya SSSR. Mosk. stankoinstrum. In-t im. I. V.
Stalina). 100 ekz. Bespl. -(54-53768)

SO: Knizhaya Letopis', Vol. 1, 1955

(A) L 13520-56 EWT(m)/EWP(J)/T RM

ACC NR: AP6001858

SOURCE CODE: UR/0190/65/007/012/2039/2047

AUTHORS: Koton, M. M.; Andreyeva, I. V.; Getmanchuk, Yu. P.; Madorskaya, L. Ya.;
Pokrovskiy, Ye. I.; Kol'tsov, A. I.; Filatova, V. A.

ORG: Institute of High-Molecular Polymers AN SSSR (Institut vysokomolekulyarnykh
soyedineniy AN SSSR)

TITLE: Structure of methacrolein polymers, obtained in the presence of anionic
catalysts. 3rd report in the series Polymerization of Acrolein and Its Derivatives

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2039-2047

TOPIC TAGS: polymerization, polymer structure, reaction mechanism, catalyst/ Nippon
Bunko infrared spectrophotometer DS 301, GNM 3 nuclear magnetic resonance spectrometer

ABSTRACT: The structure of polymers obtained from methacrolein and α -ethylacrolein
in the presence of sodium naphthalene and sodium trityl using the method described
by M. M. Koton, I. V. Andreyeva, and Yu. P. Getmanchuk (Dokl. AN SSSR, 155, 836, 1964)
was investigated. The structure analysis was performed by chemical means: oxime
formation, hydrogenation, oxidation with perbenzoic acid, ozonization, as well as by
physical means: infrared spectra, using Nippon-Bunko spectrophotometer DS-301, and
NMR spectra, using instrument GNM-3. It was established that the rate of conversion
of methacrolein and the structure of the obtained polymer are both functions of the
polymerisation temperature, as illustrated in Fig. 1. Mechanism of the polymerization

Card 1/3

UDC: 678.01:53+678.744

L 13520-66

ACC NR: AP6001858

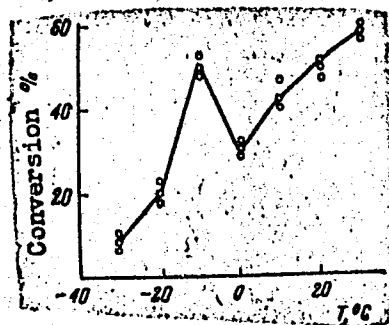
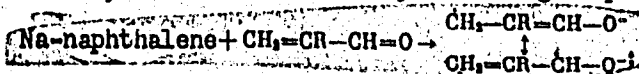
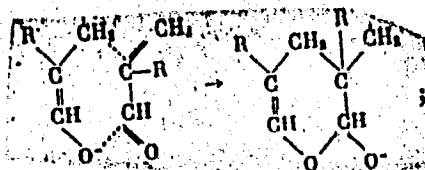


Fig. 1. Degree of methacrolein conversion to polymer within 8 hours as function of temperature. Polymerization conducted in THF in the presence of Na naphthalene (1 mol %).

reaction is offered, and is summarized by following steps: 1) initiation



2) propagation

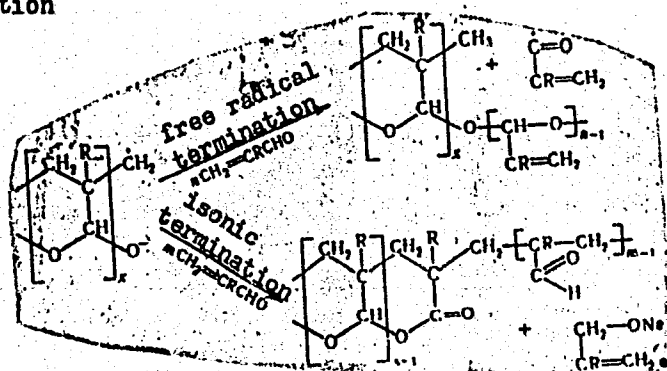


Card 2/3

L 13520-66

ACC NR: AP6001858

3) termination



At OC and above, the termination step occurs mainly along the ionic path. This mechanism explains the formation of the predominantly cyclic structures consisting of condensed tetrahydropyrane rings at temperatures below OC. Orig. art. has: 3 tables, 6 figures, 4 formulas, and 3 equations.

SUB CODE: 11, 07/

SUBM DATE: 01Dec64/

ORIG REF: 005/

OTH REF: 014

Card 3/3 *CR*

L 13082-56 EWT(m)/EWP(j)/T RM

ACC NR: AP6002215

(A)

SOURCE CODE: UR/0080/65/038/012/2740/2744

AUTHOR: Andreyeva, I. V.; Koton, M. M.; Getmanchuk, Yu. P.; Tarasova, M. G. 38

ORG: Institute of High Molecular Compounds, AN SSSR (Institut vysokomolekulyarnykh soedineniy AN SSSR) B

TITLE: Emulsion polymerization of methacrolein 145

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 12, 1965, 2740-2744

TOPIC TAGS: emulsion polymerization, methacrolein, catalytic polymerization, high polymer, polymer, acrylic plastic

ABSTRACT: Emulsion polymerization of methacrolein was studied in the presence of potassium persulfate and silver nitrate with a solution of polyacrolein bisulfite as a specific emulsifier. The object of the work was to develop a process for making a soluble polymer with high molecular weight containing reactive aldehyde groups. The optimum ratio of the monomer to water is 1:8 and the optimum polymerization temperature is 50° C. In all experiments the emulsifier content was constant (5 wt % based on the monomer). The amount of the initiator varied but the ratio of silver nitrate

Cord 1/3

UDC: 678.744

L 13082-66

ACC NR: AP6002215

activator to potassium persulfate oxidative agent was 10:1. The oxygen content in the inert gas was $0.05 \cdot 10^{-2}$ to $2 \cdot 10^{-2}$ %. The characteristic viscosity of polyacrolein product increased with increasing depth of polymerization. Presence of aldehyde groups in the polymer product permits further processing into new types of plastic sheets or resin fibers. The dependence of polyacrolein characteristic viscosity upon polymerization duration is shown in Fig. 1. The effect of pH upon polymer characteristic viscosity η is shown in Fig. 2. It was found that the lower the oxygen and propionic aldehyde contaminant content, the higher was the polyacrolein molecular weight. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 07,14/ SUBM DATE: 05Nov64/ ORIG REF: 004/ OTH REF: 002

Card 2/3

L 13082-66
ACC NR: AP6002215

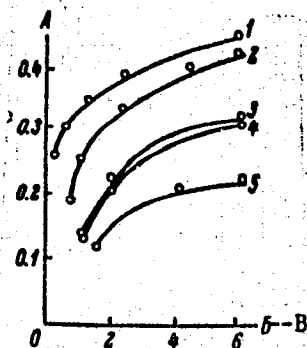


Fig. 1. Polyacrolein characteristic viscosity η as a function of polymerization duration. A - characteristic viscosity η ; B - is polymerization duration in hours; the ratio of $K_2S_2O_8$ to $AgNO_3$ in mole %; 1 - 0.6:0.06; 2 - 0.6:0.06 (in presence of a buffer), 3 and 4 - 1.3:0.13; 5 - 2.6:

Q.267.

Card 3/3 PR

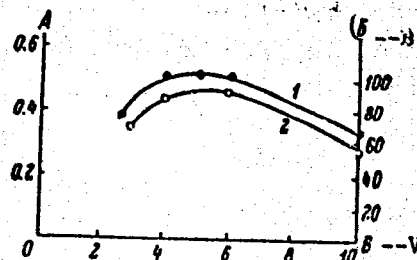


Fig. 2. The effect of solution pH on polyacrolein characteristic viscosity η and polymer yield for 6 hr polymerization and $K_2S_2O_8:AgNO_3$ ratio of 0.6:0.06 mole %.

A - η ; B - percent conversion; V - initial solution pH; 1 - polyacrolein yield in percent; 2 - polymer characteristic viscosity η .

| ANDREYEVA, I.V. | | PROCESSES AND PROPERTIES INDEX | |
|--|-------------|--------------------------------|-------------|
| 1ST ADD | 2ND ADD (R) | 1ST ADD | 2ND ADD (R) |
| CH | | | |
| <p>The synthesis of esters of the 1,3-dichloro- and -dibromohydrins of glycerol. I. V. Andreeva and L. N. Chernov. <i>Nauch. Raboty Studenov Voronezh. Gosudarst. Univ., Kafedra Org. Khim.</i> 1939, Pt. 1, 73-74; <i>Khim. Referat. Zhur.</i> 1939, No. 10, 34-35. The acetate of glycerol dichlorohydrin was obtained from AcCl and the dichlorohydrin. The yield of the crude product was approx. 90% and that of the pure product approx. 60%, b_p 98-100°, d_4^{20} 1.279, n_D^{20} 1.4571. This ester (as well as all other esters) is insol. in benzene and water, easily sol. in MeOH and EtOH. AcOEt, CHCl_3 and other org. solvents. The acetate of glycerol dibromohydrin was obtained with a yield of 81% of crude or 78% of pure product, b_p 120°, d_4^{20} 1.879, and n_D^{20} 1.6141. The chloroacetate of glycerol dichlorohydrin was obtained from the dichlorohydrin and ClCH_2COCl. The yield of the pure product was 23.71%, b_p 80-81°, d_4^{20} 1.389, n_D^{20} 1.4888. The chloroacetate of glycerol dibromohydrin was obtained in a similar manner. The yield was 21.76%, b_p 98-100°, d_4^{20} 2.046, n_D^{20} 1.5402. It was not possible to synthesize the benzoate of glycerol dichloro- or dibromohydrin.</p> <p style="text-align: right;">W. R. Henn</p> | | | |
| <p>ASH-55A METALLURGICAL LITERATURE CLASSIFICATION</p> | | | |

ANDREYEVA, I. V.

ANDREYEVA, I. V.--"The Synthesis and Polymerization of Vinyl Derivatives of the Furane and Thiophene Series." Acad Sci USSR. Inst of High-Molecular Compounds. Leningrad, 1955. (Dissertation for the Degree of Candidate in Chemical Science).

SO Knizhnaya letopis'
No 2, 1956.

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10,
p 177 (USSR) 15-57-10-14441

AUTHORS: Andreyev, P. F., Andreyeva, I. V.

TITLE: The Internal Structure of Paraffin Oils (K voprosu o
vnutrennem stroenii parafinistykh neftey)

PERIODICAL: Tr. Vses. neft. n.-i. geologorazved. in-ta, 1956,
Nr 95, pp 355-383.

ABSTRACT: Paraffin oil is believed to be a system consisting of
a dispersing medium (liquid hydrocarbons) and a dis-
persed phase (heavy tarry substances and solid hydro-
carbons). The materials of the dispersed phase are
capable of mutual adsorption and formation of complex
aggregates.

Card 1/1

G. A. Gladysheva

ANDREVA IV

Synthesis and polymerization of vinyl derivatives of furan
and thionaphthalene. I. V. Andreeva and M. M. Kozlovskii

peroxide as catalyst at 60, 80, 90, and 100°C, 100% at 120°C, and $\text{BF}_3 \cdot \text{Et}_2\text{O}$ at 0°C were also examined as catalysts. Since O_2 affected the polymerization rates in these cases, atm. O_2 was rigidly excluded. From the polymerization rates at the indicated temps. the activation energy for peroxide catalyzed polymerization was 15.5 kcal/mole. The activation energy for $\text{BF}_3 \cdot \text{Et}_2\text{O}$ catalyzed polymerization was 10.5 kcal/mole.

Support on furan for both synthesis and polymerization. The activation energy for polymerization of 2-vinylthiophene in the

temperature range 60-100°C was 15.5 kcal/mole.

ANDREYEVA, I. V.

11 7 5
✓ Synthesis and polymerization of vinyl derivatives of furan
and thiophene. I. V. Andreeva and M. M. Koton. *Proc.
Acad. Sci. U.S.S.R., Sect. Chem.* 110, 533-8 (1950) (English
translation).—See *C.A.* 51, 6039b. B M. R.

PM

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465
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3 may

~~ANDREYEVA, I.V.~~ KOTON, M.M.

Synthesis of vinyl derivatives of the furan series. Zhur. ob. khim.
27 no.3:671-677 Mr 157. (MLRA 10:6)

1. Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR.
(Furan) (Vinyl compounds)

Distri: 4E4J/4E2c(J)/4E3d

2-thienylethanol (II) and polymers. Fractionation gave about 20 g. II, b_p 74°, n_D^{20} 1.5600. This (preferably in the crude state to improve the yield) 50 g. mixed with Cu

calcd. amt. of (iso PrO)₂Al heated 12-18 hrs. in dist. app. gave the corresponding carbinal which was not isolated owing to the ease of dehydration; the crude product passed through a tube with 10% CuO at 300°C. to give a product

AUTHORS: Andreyeva, I. V., Koton, M. M.

76-32-5-4/47

TITLE: The Influence of the Structure of Monomers on the Polymerizability in the Series of Vinyl Derivatives of Furan (Vliyaniye stroyeniya monomerozv na sposobnost' k polimerizatsii v ryadu vinil'nykh proizvodnykh furana)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 5, pp. 991-994 (USSR)

ABSTRACT: The influence of the increase in number of condensed benzene rings in the initial monomers on the polymerizability and on some other properties was investigated; for this purpose 2-vinylfuran, 2-vinylbenzofuran and 2-vinyldibenzofuran were synthesized. In the determination of the polymerization kinetics in the block close to the benzoylperoxide a modified mercury dilatometer according to L.I. Yefimov was used, while in using ionic catalysts a catalyst according to Schlenk was taken. The characteristic viscosity and heat resistance of the investigated polymers were determined by the IFL instrument and are given on Table 2, together with the obtained values of activation energies. From the experimental results obtained can be seen that the velocity of polymerization in the series

Card 1/2

The Influence of the Structure of Monomers on the
Polymerizability in the Series of Vinyl Derivatives of Furan

76-32-5-4/47

of 2-vinyldibenzofuran- 2-vinylbenzofuran- 2-vinylfuran in-
creases which is in agreement with the obtained values for the
activation energies; it was also observed in the case of
using an ionic catalyst. In the same order also an increase of
the molecular weight and of the heat resistance of the corres-
ponding polymers was observed, as well as an improvement of the
dielectric properties, which corresponds to the data of refer-
ences and to the data obtained. There are 6 figures, 2 tables,
and 5 references, 3 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut vysokomolekulyarnykh soyedineniy
(Institute of High-Molecular Compounds, AS USSR)

SUBMITTED: June 19, 1956

1. Furan derivatives---Polymerization 2. Vinyl compounds
(Polymerized) 3. Vinyl compounds---Chemical reactions

Card 2/2

AUTHORS: Andreyeva, I. V., Koton, M. M. SOV/76-32-8-19/37

TITLE: The Effect of the Monomer Structure on the Polymerizability of Vinyl Derivatives of Thiophene (Vliyaniye stroeniya monomeroi na sposobnost' k polimerizatsii vinil'nykh proizvodnykh tiofena)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 8, pp. 1847-1850 (USSR)

ABSTRACT: According to data in publications the derivatives mentioned above are capable of forming polymers having dielectric properties similar to those of polystyrene and having a higher softening temperature. An investigation of these compounds is also interesting as the influence exerted by the type of different substituted heterocycles in the ethylene molecule may be investigated with respect to the polymerizability and the properties of the compounds obtained. In the present paper the number of condensed benzene rings in the initial monomer was increased, and therefore 2-vinyl thiophene and 2-vinyl dibenzothiophene were synthesized. The polymerizability was investigated according to the dilatometric method, viz., in the first solution with 0,5 mole% of benzoyl peroxide (in block and solution), and in the second in solution at 80, 90 and 100°.

Card 1/2

The Effect of the Monomer Structure on the Polymerizability of Vinyl
Derivatives of Thiophene

SOV/76-32-8-19/37

The operation technique has already been described. It was found that analogous to the furfuran series the introduction of condensed aromatic rings into the ethylene molecule increases the rate of polymerization. Besides the heat resistance increased to more than the double and the dielectric properties also improved on the occasion of the transition from 2-vinyl thiophene to 2-vinyl dibenzo thiophene. A comparison of the polymers obtained with those of the furane series shows that the latter exhibit worse properties. There are 5 figures and 10 references, 3 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut vysokomolekulyarnykh soyedineniy
(AS USSR, Institute of High-Molecular Compounds)

SUBMITTED: March 21, 1957

Card 2/2

5(3)

AUTHORS:

Andreyeva, I. V., Koton, M. M.

SOV/62-59-3-28/37

TITLE:

On the Polymerization of α -Methyl Styrene in Solid (Frozen) State
(O polimerizatsii α -metilstirola v tverdom (zamorozhenom)
sostoyanii)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 3, pp 552-553 (USSR)

ABSTRACT:

This is a brief communication on the polymerization of styrene in the block with gaseous BF_3 in solid state at -80° (freezing point of styrene -23°) in an atmosphere as dry and free from oxygen as possible. Under the same conditions α -methyl styrene was polymerized in a yield of 85 %. The polymer is soluble in organic solvents (benzene, toluene, chloroform, etc) and is precipitated from methyl or ethyl alcohol. The data on the polymerization kinetics of α -methyl styrene are given on a figure. As may be seen from it, the pressure of gaseous BF_3 in a block (without cracks) exercises only an unimportant influence on the polymerization of styrene. From the data mentioned in the table it may be seen the the yield of polymers, their molecular weight and the melting temperatures increase with the decrease of the polymerization temperature.

Card 1/2

On the Polymerization of α -Methyl Styrene in Solid
(Frozen) State

SOV/62-59-3-28/37

There are 1 figure, 1 table, and 1 reference.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR
(Institute of High-molecular Compounds of the Academy of
Sciences, USSR)

SUBMITTED: July 18, 1958

Card 2/2

28650

S/020/61/139/006/017/022
B103/B101

214200 also 1496

AUTHORS: Koton, M. M., Corresponding Member AS USSR, Andreyeva, I. V.,
Andreyev, P. F., and Rogozina, E. M.

TITLE: Complexes of polyacrolein with heavy-metal salts

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 6, 1961, 1372-1374 X

TEXT: It is noted that samples of polyacrolein powder obtained under different conditions differ in their ability to form coordination complexes with heavy-metal salts. The strongest ability to cause such reactions has uranyl nitrate. In the pH range investigated salts of Pb, Co, Mn, Cu, Ni, and Fe are not able to form stable complexes with polyacrolein. Concerning the extraction of heavy-metal salts with organic compounds, the authors refer to papers by V. M. Vdovenko (Khimiya urana i transuranovykh elementov (Chemistry of uranium and transuranic elements) Izd. AN SSSR, 1960) and V. I. Kuznetsov (Usp. khim., 23, v. 6, 654 (1954)). The maximum quantity of uranium ($2305 \cdot 10^{-6}$ g/g) was extracted from aqueous solutions by means of polyacrolein samples obtained by polymerization of acrolein in

Card 1/3

Complexes of polyacrolein with heavy-...

28650
S/020/61/139/006/017/022
B103/B101

aqueous solutions under the action of the redox system $K_2S_2O_8 + AgNO_3$ which is somewhat more effective than the system $K_2S_2O_8 +$ Mohr's salt. Disacryl and polyacrolein obtained under the action of $K_2S_2O_8 + Na_2S_2O_3$ are less effective. The poorest extracting agents are samples of polymers obtained at low temperatures in the presence of boron trifluoride or by means of lithium butyl. The authors established a relationship between the content of aldehyde groups which are able to form oximes and the ability to extract uranium from aqueous solutions. Uranium can be extracted in the range of pH3 - pH4. Outside this range the percentage of extracted uranium drops quickly. The distribution coefficients for different samples of polyacrolein differ by a factor of ten (from 0.005025 to 0.04803). Uranium absorbed by polyacrolein can be quantitatively dissolved by dilute HCl. There are 2 figures, 2 tables, 4 Soviet and 6 non-Soviet references. The reference to English-language publications reads as follows: J. S. Anderson, Nature, 134, No. 165 (1950).

Card 2/3

28650

S/020/61/139/006/017/022

Complexes of polyacrolein with heavy-... B103/B101

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk
SSSR (Institute of High-molecular Compounds, Academy of
Sciences USSR) ✓

SUBMITTED: April 8, 1961

Card 3/3

ANDREYEV, P.F.; ANDREYEVA, I.V.; ROGOZINA, E.M.

Reaction of uranyl salts with the components of plant tissue and
some of its derivatives. Geokhimiia no.4:313-317 '62. (MIRA 16:7)
(Uranyl salts) (Plant cells and tissues)

1
6

36292

S/190/62/004/004/008/019
B119/B138

5.3100
12.8500

AUTHORS: Andreyeva, I. V., Koton, M. M., Kovaleva, K. A.

TITLE: Polymerization of acrolein and its derivatives. I. Low-temperature polymerization of acrolein and α -methyl acrolein

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 4, 1962, 528-532

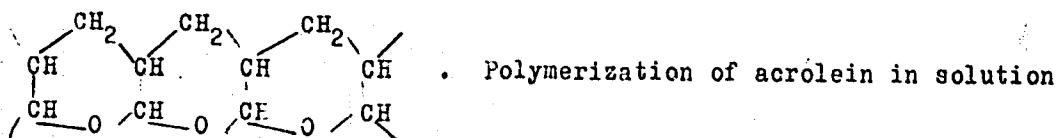
TEXT: Acrolein (1) and α -methyl acrolein (2) were polymerized in the presence of gaseous BF_3 between 0 and -80°C in block and in solution (solvent: CH_2Cl_2). The experiments were made in sealed ampoules, partly with exclusion of O_2 and H_2O , partly in the presence of very small amounts of H_2O . Results: Polymers obtained in block polymerization with 10-15% conversion are completely soluble in organic solvents. With a higher degree of conversion, the reaction product becomes insoluble in organic solvents but soluble in sulfurous acid. The reaction with 15-20% conversion without H_2O takes 15-30 hr at -20°C , with H_2O , 3-8 hr.

Card 1/3

Polymerization of acrolein and its ...

S/190/62/004/004/008/019
B119/B138

The molecular weight of the polymer produced in the presence of H_2O is lower than in the one produced without water. Maximum conversion was attained at -20 to $-40^\circ C$ with 1.5 mole% BF_3 (with 1) and 2.5 - 3 mole% (with 2). The block polymers give no aldehyde reaction, they are cyclized:



gives a soluble product with a melting point of $150-170^\circ C$ and $[\eta]$ 0.06 - 0.07 in benzene at $-60^\circ C$ and 30% conversion, but an insoluble and nonmelting product at $-20^\circ C$ and 30% conversion. The polymer obtained from dilute solutions is not cyclized. At $-20^\circ C$ the rate of polymerization decreases in the order acrolein - α -methyl acrolein - α -ethyl acrolein. There are 4 figures and 1 table.

Card 2/3

S/186/62/004/006/004/009
E075/E436

AUTHORS: Andreyeva, I.V., Andreyev, P.F., Rogozina, E.M.

TITLE: Investigation of the process and products of interaction of high molecular weight compounds with inorganic salts. I. The formation of polyacrolein complexes with uranyl nitrate

PERIODICAL: Radiokhimiya, v.4, no.6, 1962, 660-667

TEXT: The complex forming ability of various polyacroleins was examined for the first time. This work forms a start of a long-term investigation of complex formation between metals and the derivatives of polyacrolein and other polymers with carbonyl groups. The polyacroleins investigated were obtained by 1) polymerization of acrolein in water in the presence of oxidation-reduction initiators; 2) polymerization of pure, dry acrolein without initiators; 3) low temperature (-20°C) polymerization in the presence of traces of H_2O or BF_3 ; 4) polymerization in benzene solution + Na; 5) block polymerization in the presence of lithium butyl at 20°C . The complexes with $\text{UO}_2(\text{NO}_3)_2$ were formed in aqueous solutions; their

Card 1/2

ANDREYEVA, I.V.; KOTON, M.M.; KOVALEVA, K.A.

Polymerization of styrene derivatives in the solid (frozen) state.
Izv. AN SSSR. Otd. khim. nauk no. 10: 1890-1891 O '62. (MIRA 15:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Styrene) (Polymerization)

ANDREYEVA, I.V.; ANDREYEV, P.F.; ROGOZINA, E.M.

Processes and interaction products of macromolecular compounds
with inorganic salts. Part 2: Formation of complexes of
poly(~~α~~-methyl)acrolein with uranyl nitrate. Radiokhimiia
5 no.1:103-106 '63. (MIRA 16:2)

(Acrolein)
(Uranyl nitrate)
(Macromolecular compounds)

38615
S/020/62/144/005/013/017
B124/B138

15.8070
AUTHORS: Koton, M. M.; Corresponding Member, AS USSR, Andreyeva, I. V.,
and Getmanchuk, Yu. P.

TITLE: Emulsion polymerization of α -methyl acrolein in the presence
of various redox systems

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 144, no. 5, 1962, 1091-1093

TEXT: α -methyl acrolein was polymerized in various redox systems in the presence of a new type of emulsifier, aqueous polyacrolein sulfite. This yields a stable emulsion, and polymerization takes place in the micelles of the emulsifier. Polymerization is carried out in ten times the amount of water with addition of twice the amount of a 2 % aqueous emulsifier, all related to the monomer used. The most suitable redox system for this scope is potassium persulfate and silver nitrate which gives high polymer yields of maximum molecular weight. All α -methyl-acrolein polymers obtained contain 65-70 % aldehydic groups, while for polyacrolein prepared in the same redox systems this figure is 20-70 %. This is due to the methyl group in the side chain of the α -methyl acrolein molecule, which prevents the

Card 1/2

KOTON, M.M.; ANDREYEVA, I.V.; ANDREYEV, P.P.; DANILOV, L.G.; ROGOZINA, E.M.

Reactions of an aqueous solution of polyacrolein with inorganic salts. Dokl. AN SSSR 146 no.3:608-610 S '62. (MIRA 15:10)

1. Institut vysokomolekulyarnykh soedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Koton).
(Acrolein) (Salts) (Macromolecular compounds)

KOTON, M.M.; ANDREYEVA, I.V.; GETMANCHUK, Yu.P.

Polymerization of meta-acrolein with anion catalysts. Dokl. AN
SSSR 155 no. 4:836-838 Ap '64. (MIRA 17:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR. 2. Chlen-
korrespondent AN SSSR (for Koton).

ANDREYEVA, I.V.; ANDREYEV, P.F.; DANILOV, L.T.; ROGOZINA, E.M.

Processes and products of the interaction of high-molecular weight compounds with inorganic salts. Part 3: Reaction of aqueous solutions of polyacrolein. Radiokhimiya 6 no. 1: 86-93 '64. (MIRA 17:6)

ACCESSION NR: AP4020057

S/0186/64/006/001/0086/0093

AUTHOR: Andreyeva, I. V.; Andreyev, P. F.; Danilov, L. T.; Rogoz'ina, E. M.

TITLE: Processes and products of reaction of high molecular compounds with inorganic salts

SOURCE: Radiokhimiya, v. 6, no. 1, 1964, 86-93

TOPIC TAGS: polyacrolein inorganic salt reaction, polyacrolein reaction, polyvinylalcohol, coagulation, gel formation, metal precipitation, variable valence metal reduction, polyaldehyde, hydrated aldehyde group, thorium polyacrolein complex

ABSTRACT: In continuation of earlier work on polyacrolein and its ability to extract metals from aqueous solutions, a number of reactions were run or attempted between 3% polyacrolein and 3% mineral salt solutions. Aqueous solutions of polyacrolein have a series of characteristic properties explained by the presence of an external hydrate shell and hydrated aldehyde groups for the polymeric molecule:

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ACCESSION NR: AP4020057

acid medium. The complexes formed have constant compositions, differing depending on pH of the media: in acid solution one thorium atom is complexed with 24 or 28 elementary ligand links; at pH 4.73 and 8.32, with 8 and 9 linkages regardless of the ratio of the reactants. Reaction with potassium bichromate and ammoniacal solution of hydrated copper oxide gives, as do polyvinylalcohol solutions, gels which are insoluble in water. The structure of the polyacrolein-hydrated copper oxide complex may be represented by gelation of polyvinylalcohol. Preliminary data obtained indicates that elements with variable valence can be reduced with aqueous polyacrolein solutions under determined conditions. It is therefore assumed that the polyacrolein molecule can react as a polyaldehyde. This capacity of polyacrolein for many chemical and physical-chemical conversions makes it a theoretically and practically interesting material. Orig. art. has: 4 tables, 7 formulas, and 1 figure.

ASSOCIATION: None

SUBMITTED: 15Sep62

SUB CODE: MT, GC

DATE ACQ: 31Mar64
NO REF SOV: 003

ENCL: 00
OTHER: 005

Cord3/3

L 16088-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Pe-4 RPL/ASD(m)-3/
AFETR WW/RM

ACCESSION NR: AP4049923

S/0020/64/159/003/0602/0604

AUTHOR: Koton, M. M. (Corresponding member AN SSSR); Andreyeva, I. V.;
Turbina, A. I.; Sinyavkiy, V. G.

TITLE: Polymerization of o-hydroxyphenyl vinyl ketone

SOURCE: AN SSSR. Doklady*, v. 159, no. 3, 1964, 602-604

TOPIC TAGS: chelate polymer, o-hydroxyphenyl vinyl ketone, polymer,
metal chelate copolymer, methyl methacrylate, divinylbenzene

ABSTRACT: The conditions of the radical polymerization of o-hydroxy-
phenyl vinyl ketone were studied in an effort to obtain polymers con-
taining chelate groups by direct polymerization or copolymerization.
The o-hydroxyphenyl vinyl ketone, synthesized specially for the study,
was polymerized in a nitrogen atmosphere by several methods: in
solution, in bulk, and in suspension. Either benzoyl peroxide or
azobisisobutyronitrile were used as initiators. The polymerization
temperature was 75-80C. The colorless (after reprecipitation) powder-
like polymer is soluble in some organic solvents, such as benzene,

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L 16088-65

ACCESSION NR: AP4049923

5

acetone, pyridine, or dimethylformamide, and in dilute alkalis; it is insoluble in methanol, carbon tetrachloride, or ethyl ether. The molecular weight of 125,000 was determined by the light-dispersion method. The intrinsic viscosity of polymers depends on the method of obtaining them. The lowest values were obtained for the product polymerized in solution; the highest, in suspension. The kinetics of the polymerization were studied, and the curves and the constants were obtained. The IR spectra confirm that polymerization takes place only along the double bonds. The oxime derivatives confirm the presence of the theoretical number of carbonyl groups in the polymers obtained. Products of copolymerization of o-hydroxyphenyl vinyl ketone with methyl methacrylate or divinylbenzene were also obtained; the latter product has ion-exchange properties. The presence of chelate groups in the polymers studied makes it possible to use these polymers or copolymers for obtaining polymeric complexes with metals. Orig. art. has: 1 formula, 2 tables, and 2 figures.

ASSOCIATION: Institut vysokomolekulyarnykh soedineniy Akademii nauk SSSR (Institute of Macromolecular Compounds, Academy of Sciences, SSSR)

Card 2/3

L 16088-65
ACCESSION NR: AP4049923

SUBMITTED: 09Jul64

UNCL: 00

SUB CODE: GC, MT

NO REF SOV: 004

OTHER: 001

ATD PRESS: 3145

Card 3/3

RAVIN, V.K.; ANDREYEVA, I.V.

Inactivation of the phage genome λ by acridine dyes following
infection with Escherichia coli K12S. Mikrobiologiya 33 no.5:
819-823 S-O '64. (MIRA 18:3)

1. Institut biofiziki AN SSSR.

ANDREYEVA, I.V.; ROGOZINA, E.M.; ANDREYEV, P.F.

Processes and products of the reaction of high-molecular compounds with inorganic salts. Part 5: Physicochemical studies of the reaction of polyacrolein with inorganic salts. Radiokhimiia 7 no.1:83-90 '65. (MIRA 18:6)

RAVIN, V.K.; ANIMONYEVA, I.V.

Effect of ultraviolet irradiation on the temperate phage-bacterium complex in various stages after its formation. Mikrobiologiya 34 no.1:110-113 Ja-F '65. (MIRA 18:7)

1. Institut biologicheskoy fiziki AN SSSR i Institut mikrobiologii i epidemiologii imeni N.F. Gamalei AMN SSSR.

GERSHANOVICH, V.N.; BURD, G.I.; ANDREYEVA, I.V.; ZUYEV, V.A.

Effect of phage T2 "ghosts" on the synthesis of inducible beta-galactosidase in Escherichia coli B cells. Biokhimiia 30 no.2: 395-406 Mr-Apr '65. (MIRA 18:7)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR, Moskva.

ANDREYEVA, I.V.; KESHISMAN, G.O.; ANDREYEV, P.F.; DANILOV, L.T.

Processes and products of the reaction of macromolecular compounds with inorganic salts. Part 4: Reaction of aqueous solutions of polyacrolein with tannin and gelatin in salt solutions. Radiokhimiia 6 no.4:491-493 '64. (MIRA 18:4)

ACC NR:AP6034385

(N)

SOURCE CODE: UR/0402/66/000/005/0573/0578

AUTHOR: Ravin, V. K.; Andreyeva, I. V.

ORG: Institute of Biophysics, AN SSSR (Institut biologicheskoy fiziki AN SSSR); Institute of Epidemiology and Microbiology im. N. F. Gamalei, AMN SSSR, Moscow (Institut epidemiologii i mikrobiologii AMN SSSR)

TITLE: A mutant of λ bacteriophage resistant to acridine orange

SOURCE: Voprosy virusologii, no. 5, 1966, 573-578

TOPIC TAGS: virology, cytology, immunology, bacteriophage, *DNA*
~~deoxyribonucleic acid~~

ABSTRACT: A mutant of λ bacteriophage resistant to acridine orange both within and outside the cell was obtained from cultures of *E. coli* K 12 λ . The mutant was serologically identical to wild-type phage. No differences were noted between strains in lysogenic capacity, sensitivity to ultraviolet

Card 1/2

UDC:576.856.9-095.57.097.22:615.778.292

AUTHORS: Yefremov, G.V., Andreyeva, I.Yu.

54-10-2-12/16

TITLE: The Co-Precipitation of Thallium and Cadmium Sulfide
(Soosazhdeniye talliya s sul'fidom kadmiya)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya fiziki i
khimii , 1958, Vol.10, Nr 2, pp. 117-121 (USSR)

ABSTRACT: I.P. Alimarin (Ref 1) and other authors showed that cadmium sulfide is a good collector for microgram quantities of thallium. In view of the quantities of thallium that are usually lost in production and because of the difference in the conditions of co-precipitation, the authors studied the co-precipitation of thallium with cadmium sulfide. Final determination was carried out according to the calorimetric method by the application of methyl violet after oxidation of the thallium by bromine water. Under prevailing conditions the ions $[CdBr_4]^{2-}$ and $[CdCl_4]^{2-}$ are formed, which, according to data supplied by N.T. Voskresenskaya (Ref 4) form compounds with vat dyes and thereby render the determination of thallium difficult. It was found by an investigation of this development that if up to 75 milligrams of cadmium are present, the influence exercised by the ion $[CdBr_4]^{2-}$ is so small that it is hardly

Card 1/2

The Co-Precipitation of Thallium and Cadmium Sulfide

54-10-2-12'16

manifested at all in results obtained, nor was thallium determination influenced in any way by the presence of the ion $[CdCl_4]^{2-}$ under the same conditions. Average values of the precipitation percentage of thallium for different correlations of thallium, cadmium, and pH solution are given (table 1). It may be seen from this table that the highest co-precipitation percentage is found at pH 5-5.6. Both an increase and a reduction of pH, conditions otherwise remaining the same, leads to a reduction of the percentage. Precipitation of sulfide was, in the case of all previous experiments, carried out at a temperature of 70-80°. At lower temperatures precipitation is finely dispersed, and therefore co-precipitation of thallium increases. At low precipitation temperatures (20°) the coagulation of the precipitation is made difficult. For a long time it remains in the form of sol (table 3). In the case of repeated precipitation of cadmium sulfide thallium can practically be fully eliminated. The values obtained show that the co-precipitation of thallium with cadmium sulfide takes place mainly at the expense of surface adsorption. There are 7 tables, and 4 references, all of which are Soviet.

SUBMITTED:

December 25, 1957

AVAILABLE:

Library of Congress

Card 2/2

1. Thallium--Precipitation
2. Cadmium sulfide--Precipitation
3. Thallium--Determination
4. Cadmium sulfide--Determination
5. Colorimetry--Applications

YEFREMOV, G.V.; ANDREYEVA, I.Yu.

Coprecipitation of thallium with cadmium sulfide [with summary in English]. Vest. LGU 13 no.10:117-121 '58. (MIRA 11:6)

(Thallium)

(Cadmium sulfide)

S/032/60/026/012/012/036
B020/B056

AUTHORS: Fratkin, Z. G. and Andreyeva, I. Yu.
TITLE: The Spectroscopic Analysis of Impurities in High-purity Sulfur
PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 12, pp. 1370-1371

TEXT: Two methods of determining the purity of high-purity sulfur by means of spectrum analysis were worked out, namely the direct spectroscopic determination and the determination with previous enrichment of the sample. Work in this field was carried out by A. N. Bronshteyn and L. M. Ivantsov (Ref. 1). In the case of the first method, the standards were prepared in such a manner that the elements Fe, Co, Cu, Ag to be determined were mixed, as sulfides together with sulfur into a jasper- or agate mortar, and aluminum was introduced as Al_2O_3 . The spectra were recorded by means of the spectrograph ИСП-28 (ISP-28). As exciter, an a.c. arc with an amperage of 7 a was used. The sample was pressed into the channel of the lower carbon electrode, whose diameter was 3 mm and whose depth was 4 mm. The upper
Card 1/4